IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

Explanation of Significant Differences

Explanation of Significant Differences for the Record of Decision for the Test Area North Operable Unit 1-10

At the Idaho National Engineering and Environmental Laboratory
Idaho Falls, Idaho

DOE/ID-11050
Revision 0

Explanation of Significant Differences for the Record of Decision for the Test Area North Operable Unit 1-10

April 2003

Prepared for the
U.S. Department of Energy
Idaho Operations Office

Signature sheet for the *Explanation of Significant Differences for the Record of Decision for the Test Area North Operable Unit 1-10* at the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Environmental Quality.

C. Stephen Allred, Director
IDEQ

April 3, 2003
Date

Signature sheet for the *Explanation of Significant Differences for the Record of Decision for the Test Area North Operable Unit 1-10* at the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Environmental Quality.

Michael F. Gearheard, Director
Environmental Cleanup Office
EPA

26 MARCH 2003
Date

Signature sheet for the *Explanation of Significant Differences to the Record of Decision for the Test Area North Operable Unit 1-10* at the Idaho National Engineering and Environmental Laboratory, between the U.S. Department of Energy and the U.S. Environmental Protection Agency, with concurrence by the Idaho Department of Environmental Quality.

Robert M. Stallman, Acting Assistant Manager
Environmental Management, DOE

4/15/03
Date

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ACRONYMS

AOC	area of contamination
ARAR	applicable or relevant and appropriate requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	contaminant of concern
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EPA	U.S. Environmental Protection Agency
ESD	Explanation of Significant Differences
ICDF	INEEL CERCLA Disposal Facility
IDEQ	Idaho Department of Environmental Quality
INEEL	Idaho National Engineering and Environmental Laboratory
OSWER	Office of Solid Waste and Emergency Response
OU	operable unit
PCB	polychlorinated biphenyl
ppb	parts per billion
PRG	preliminary remediation goal
RBCA	risk-based corrective action
ROD	Record of Decision
TAN	Test Area North
TEQ	toxic equivalent
TPH	total petroleum hydrocarbon
TSF	Technical Support Facility
USC	United States Code
WAG	waste area group
WRRTF	Water Reactor Research Test Facility

Explanation of Significant Differences for the Record of Decision for the Test Area North Operable Unit 1-10

1. INTRODUCTION

This Explanation of Significant Differences (ESD) applies to the remedial actions performed under the *Final Record of Decision for Test Area North, Operable Unit 1-10, Idaho National Engineering and Environmental Laboratory* (DOE-ID 1999). The U.S. Department of Energy Idaho Operations Office (DOE-ID); U.S. Environmental Protection Agency (EPA), Region 10; and the Idaho Department of Health and Welfare—now identified as the Idaho Department of Environmental Quality (IDEQ)—signed the Record of Decision (ROD) in December 1999. The EPA and IDEQ support the need for this ESD.

This ESD—prepared in accordance with Section 117(c) of the "Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA/Superfund)" (42 USC § 9601 et seq.) and Section 300.435(c)(2)(i) of the "National Oil and Hazardous Substances Pollution Contingency Plan" (40 CFR 300)—documents significant changes to portions of the remedies selected in the ROD for several sites at the Test Area North (TAN) Technical Support Facility (TSF) and at the Water Reactor Research Test Facility (WRRTF). The sites and remedy changes include the following:

- TSF-09 and TSF-18 V-Tanks—The changes to the V-Tanks' remedy in this ESD include addressing further characterization of the V-Tanks' area contaminated soil and further defining the corresponding area of contamination (AOC). This ESD also includes a change to the applicable or relevant and appropriate requirement (ARAR) for identifying polychlorinated biphenyl (PCB) remediation waste.

- WRRTF-01 Burn Pits—Additional characterization and evaluation performed under the ROD have determined that the remedy for one more of the four WRRTF-01 burn pits should change from native soil cover to no action, making a total of two of the four burn pits being no action. The characterization and evaluation also determined that the contaminant for two of the WRRTF-01 burn pits (II and IV) is asbestos rather than lead (DOE-ID 2003).

- TSF-03 Burn Pit—Additional characterization and evaluation performed under the ROD have determined that the remedy should change from native soil cover to the contingent remedy of soil removal and disposal. The characterization and evaluation also determined that the dioxins and furans are detected, but are below cleanup levels established in EPA guidance. The dioxins and furans are collocated with the primary contaminant of concern (lead) (DOE-ID 2003).

- WRRTF-13 Fuel Leak—Additional sampling and risk-based corrective action (RBCA) analysis performed under the ROD have determined that contamination at the site does not pose a risk to human health and no soil removal or institutional controls are needed (INEEL 2002a).

- TSF-08 Mercury Spill Area—Consideration of timing and coordination between this ROD and the Operable Unit (OU) 10-08 ROD has shown that it is beneficial to move this site to the OU 10-08 ROD for remedial action, if it is determined that action is necessary.

This ESD will become part of the Idaho National Engineering and Environmental Laboratory (INEEL) administrative record. The INEEL administrative record is on the Internet at http://ar.inel.gov/ and is available to the public at the following locations:

INEEL Technical Library	Albertson's Library
DOE Public Reading Room	Boise State University
1776 Science Center Drive	1910 University Drive
Idaho Falls, ID 83415	Boise, ID 83725
(208) 526-1185	(208) 426-1625

2. SUMMARY OF SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

2.1 Site History

The INEEL, which is managed by the U.S. Department of Energy (DOE), is a government facility located 51 km (32 mi) west of Idaho Falls, Idaho. The INEEL occupies 2,305 km^2 (890 mi^2) of the northeastern portion of the Eastern Snake River Plain. In 1949, the U.S. Atomic Energy Commission established the INEEL as the National Reactor Testing Station. The purpose was to conduct nuclear energy research and related activities. In 1974, the National Reactor Testing Station was re-designated the Idaho National Engineering Laboratory; in 1997, it was renamed the Idaho National Engineering and Environmental Laboratory to reflect expansion of its mission to include a broader range of engineering and environmental management activities. The developed area within the INEEL is surrounded by a 13-km^2 (5-mi^2) buffer zone used for cattle and sheep grazing. The county land surrounding the INEEL is approximately 45% agricultural, 45% open land, and 10% urban. Sheep, cattle, hogs, and poultry are produced. In addition, potatoes, sugar beets, wheat, barley, oats, forage, and seed crops are cultivated. Most of the land surrounding the INEEL is owned by private individuals or the U.S. government.

The TAN facility is located in the northern portion of the INEEL (see Figure 1), and the nearest communities are Howe (west) and Mud Lake (east). The TAN TSF was constructed between 1954 and 1961 to support the Aircraft Nuclear Propulsion Program. The program's objectives were to develop and test designs for nuclear-powered aircraft engines. Upon termination of this research in 1961, TAN's facilities were converted to support a variety of other DOE research projects. From 1962 through 1986, the area supported reactor safety testing at the Loss-of-Fluid Test Facility, the Initial Engine Test Facility, and WRRTF shown in Figure 2. Beginning in 1980, the area was used to conduct work with material from the 1979 Three-Mile Island reactor accident. Current activities include the manufacture of armor for military vehicles at the Specific Manufacturing Capability Project, nuclear inspection, and storage operations.

2.1.1 V-Tank Site

The two V-Tank sites (TSF-09 and TSF-18) have similar attributes and are located in the same area (see Figure 3). The two tank sites were evaluated together in the ROD (DOE-ID 1999) due to similarities. Because of these similarities, all of the tanks, the tank contents, and associated piping are being managed as one system.

Site TSF-09 includes three abandoned 37,850-L (10,000-gal) underground storage tanks (V-1, V-2, and V-3), associated ancillary piping, the contents of the tanks, and surrounding contaminated soil. Site TSF-18 includes an abandoned 1,514-L (400-gal) underground storage tank (Tank V-9), the tank contents, a sand filter, associated piping ancillary to the tank and sand filter, and surrounding contaminated soil.

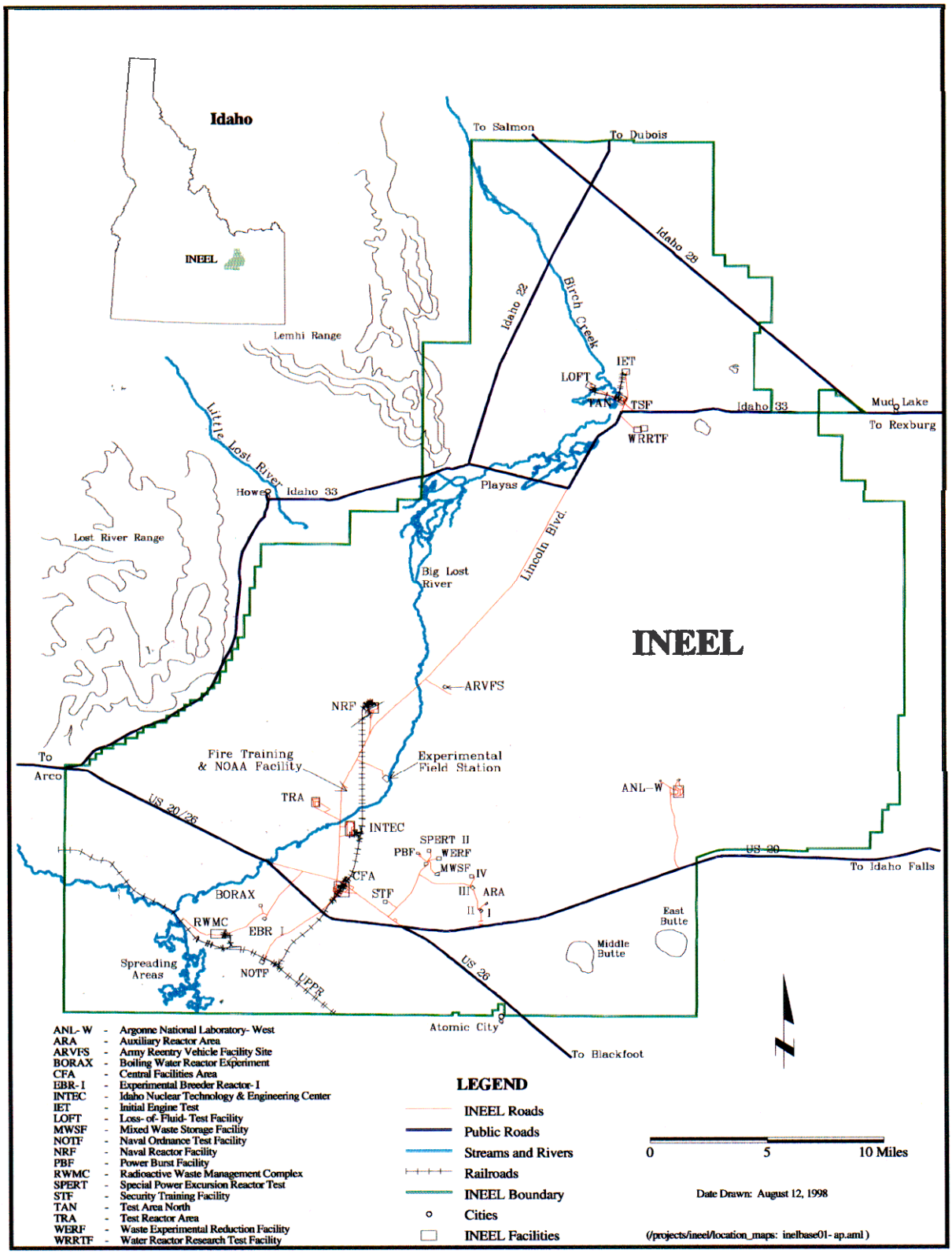

Figure 1. Location of INEEL facilities.

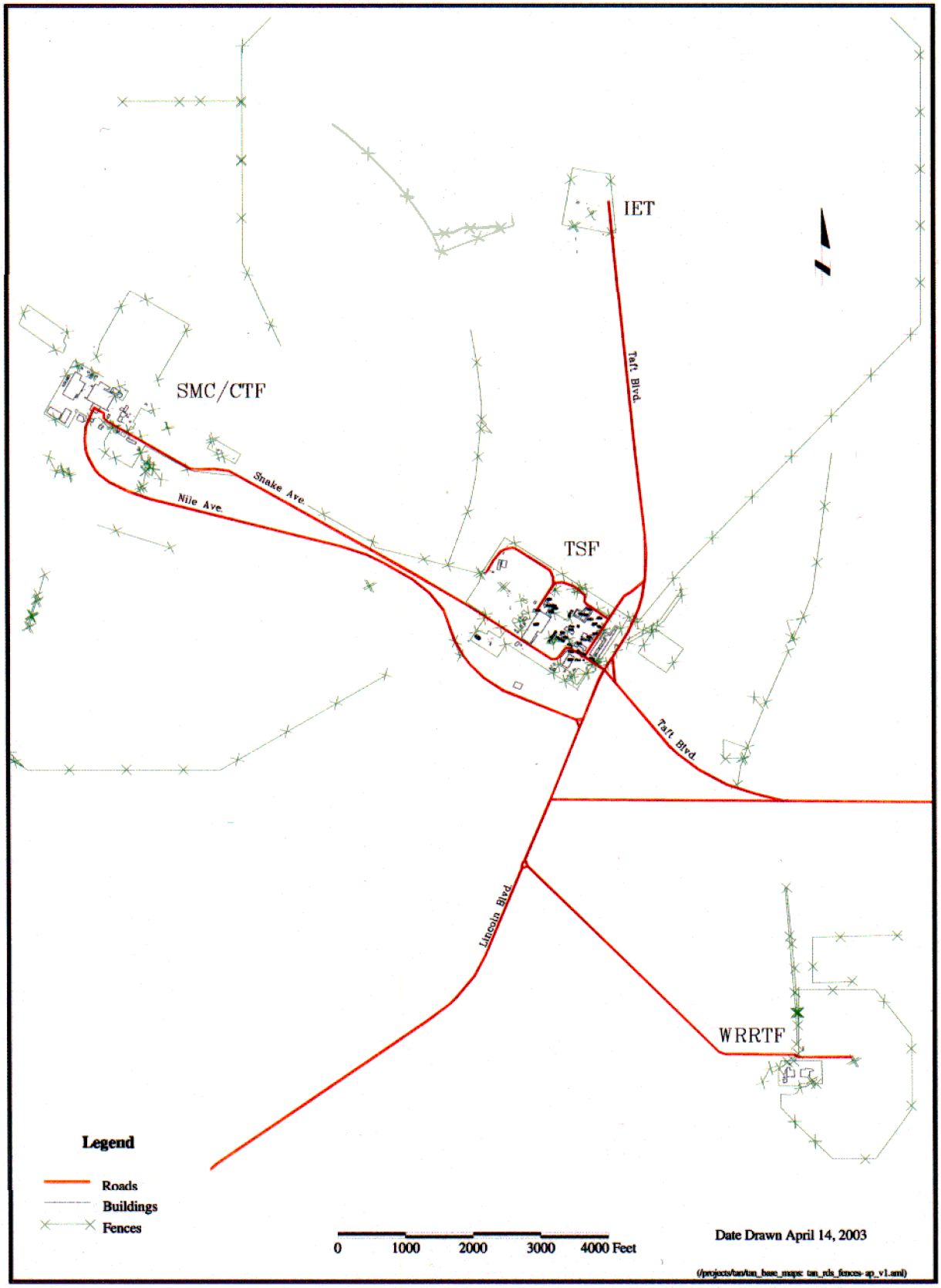

Figure 2. Location of individual TAN facilities.

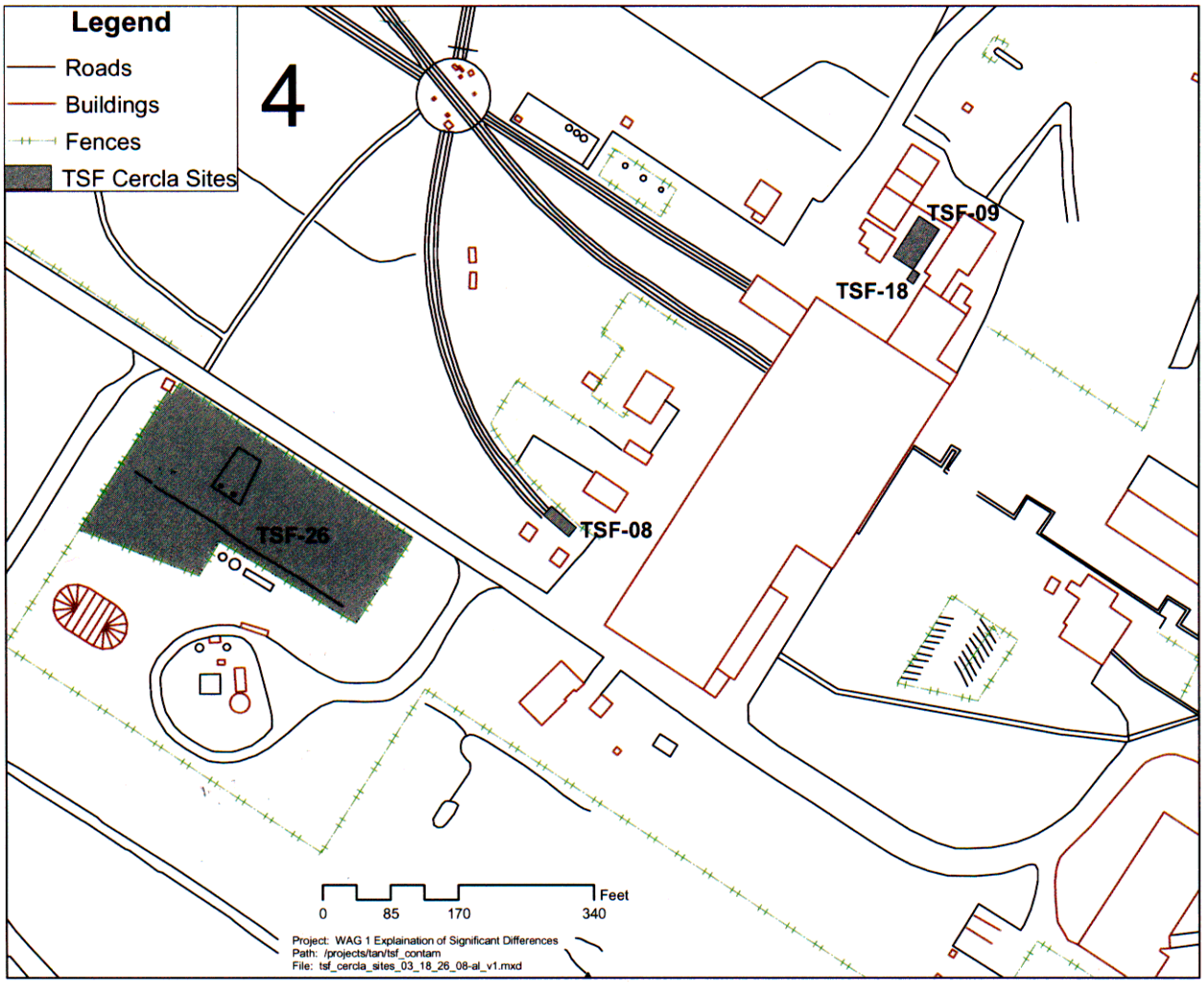

Figure 3. Location of V-Tank Site TSF-09/18 and Mercury Spill Area TSF-08.

2.1.2 WRRTF-01 and TSF-03 Burn Pit Sites

The two burn pit sites were used for open burning of construction debris. The WRRTF-01 burn pits are approximately 823 m (2,700 ft) north of WRRTF, outside the facility fence (see Figure 4). The total surficial boundary dimensions of this site are estimated to be 122 × 50 m (400 × 164 ft), and 15 cm to 3 m (6 in. to 9 ft) of clean soil covers the site and the site has been revegetated.

The TSF-03 burn pit is located in the northeast corner of TSF, outside the facility fence (see Figure 4). The surficial boundary dimensions are estimated to be 7.9 × 19.5 m (26 × 64 ft), and 0.6 to 1.8 m (2 to 6 ft) of clean soil covers the site and the site has been revegetated.

2.1.3 WRRTF-13 Fuel Leak

The fuel leak site was contaminated by leaks from diesel and heating oil tanks and associated piping. The WRRTF-13 is located at the WRRTF-05 injection well and is shown in Figure 5. Several tanks, associated lines, and contaminated soil were removed and disposed of in the early 1990s; the excavated areas were backfilled with clean soil. The estimated volume of contaminated soil within the top 3 m (10 ft) of soil is 300 m^3 (400 yd^3).

2.1.4 TSF-08 Mercury Spill Area

The TSF-08 mercury spill area is a section of railroad bed near the southwest corner of the TAN-607 building (see Figure 3). In 1958, the area was contaminated by a large mercury spill from the Heat Transfer Reactor Experiment-III engine. A removal action was done in 1994, and the area was backfilled with clean gravel. Post-removal sampling showed low levels of mercury at least 0.76 m (2.5 ft) below ground surface. The site is approximately 12 × 3 m (40 × 10 ft).

2.2 Contamination in accordance with the 1999 Record of Decision

The nature and extent of contamination, as defined in the OU 1-10 ROD (DOE-ID 1999), are summarized in the following subsections.

2.2.1 V-Tank Site

Tank contents are contaminated with radionuclides, heavy metals, organic compounds, and PCBs. The soil surrounding the tanks was contaminated by waste spilled during tank-transfer operations. Contamination has been detected throughout the 15.2 × 24.4-m (50 × 80-ft) AOC. The contaminant of concern (COC) for soil at the V-Tank site is Cs-137.

2.2.2 WRRTF-01 and TSF-03 Burn Pit Sites

When the ROD was signed in 1999, the only COC for both the WRRTF-01 and TSF-02 sites was lead.

2.2.3 WRRTF-13 Fuel Leak

Evaluation of sample results from the fuel leak site when the tanks and piping were removed from the area indicated that the maximum total petroleum hydrocarbons (TPHs) were above the 1,000-mg/kg evaluation standards (INEEL 2002b).

2.2.4 TSF-08 Mercury Spill Area

The TSF-08 mercury spill area is a section of railroad bed near the southwest corner of the TAN-607 building. In 1958, the area was contaminated by a large mercury spill from the Heat Transfer Reactor Experiment-III engine. A removal action was done in 1994, and the area was backfilled with clean gravel. Post-removal sampling showed that low levels of mercury above risk levels remain at least 0.76 m (2.5 ft) below ground surface. The site is approximately 12 × 3 m (40 × 10 ft).

2.3 Selected Remedy in accordance with the 1999 Record of Decision

The selected remedy, as defined in the OU 1-10 ROD (DOE-ID 1999), is summarized in the following subsections.

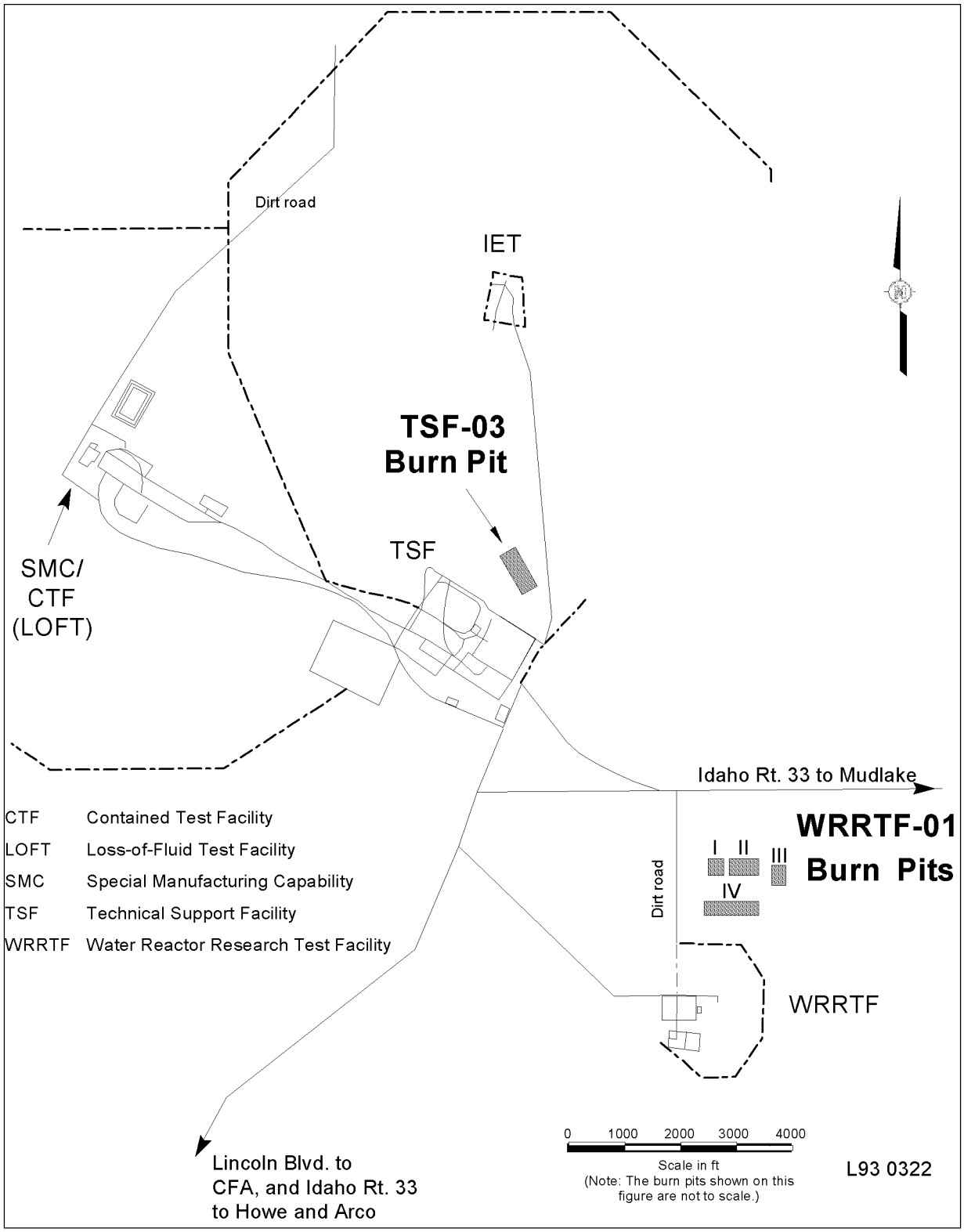

Figure 4. Location of Burn Pits TSF-03 and WRRTF-01.

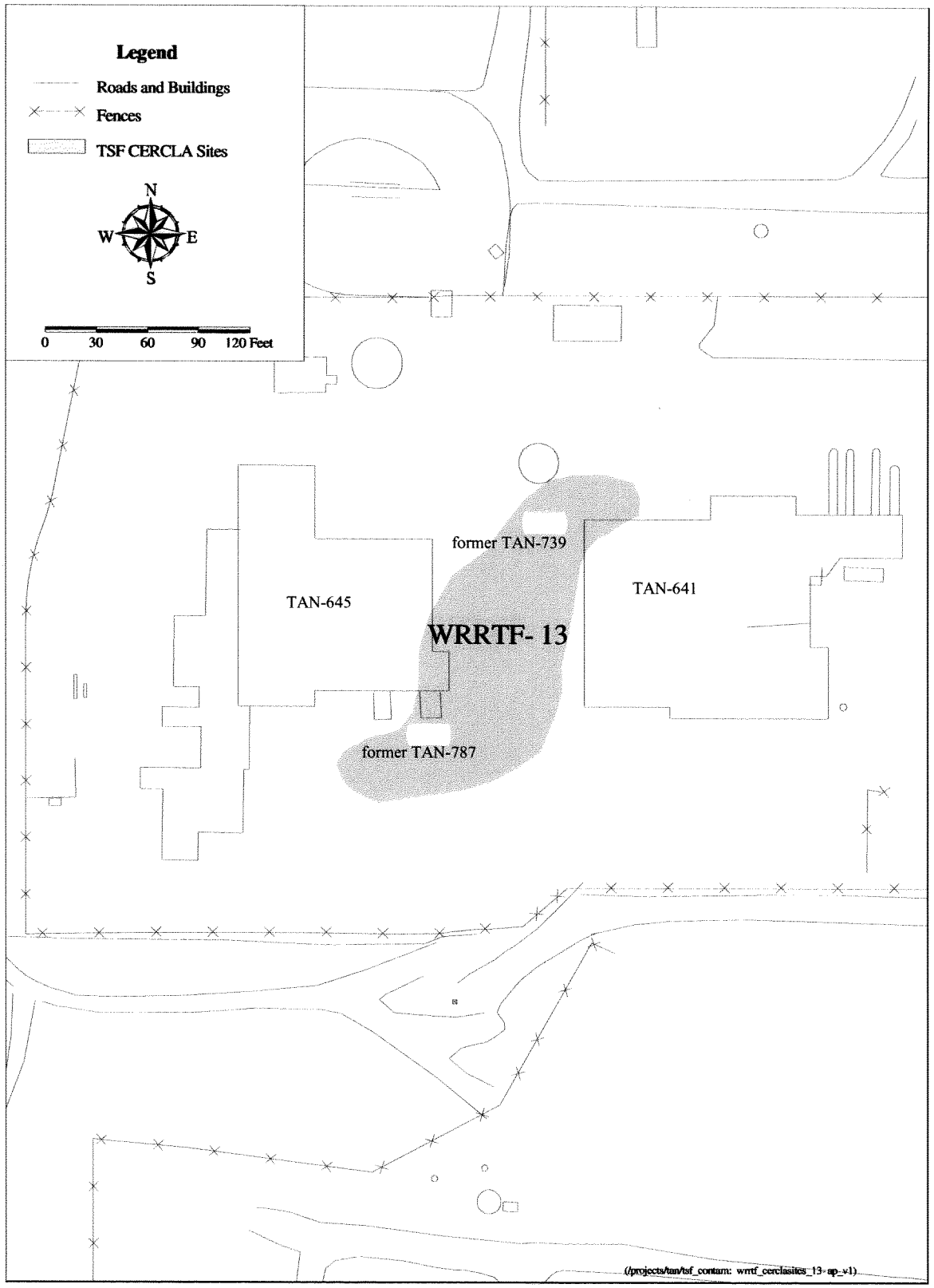

Figure 5. Location of WRRTF-13 fuel leak site.

2.3.1 V-Tank Site

The remedy identified in the ROD (DOE-ID 1999) was Alternative 2—soil and tank removal, ex situ treatment of tank contents, and disposal. The major components of the V-Tank remedy, as described in the ROD, were:

- Excavating contaminated soil
- Disposing of contaminated soil at an acceptable repository
- Sampling tank contents
- Removing tank contents
- Transporting the tank contents to an off-Site treatment facility
- Treating tank contents at an approved Resource Conservation and Recovery Act and Toxic Substances Control Act mixed waste treatment facility
- Disposing of tank contents at the INEEL CERCLA Disposal Facility (ICDF), the Waste Isolation Pilot Plant, or another acceptable facility
- Decontaminating the tanks and removing the tanks for disposal
- Performing post-remediation soil sampling at the bottom of the excavation to verify that remedial goals have been met and analyzing for additional contaminants in the V-Tank waste to perform a risk analysis for an institutional control determination at these sites
- Filling the excavated area with clean soil and then contouring and grading to surrounding soil
- Establishing and maintaining institutional controls consisting of signs, access control, and land-use restrictions, if results of post-remediation sampling identify the need for them.

The ROD further indicated that the chosen treatment facility will treat tank contents for PCBs, volatile and semivolatile organic compounds, and heavy metals and will reduce the waste volume. Treated residue will remain as a mixed waste, and it will be shipped back to the INEEL for storage and will await final disposal at an approved disposal facility. The ARARs for this remediation were identified and explained in Table 7-3 of the ROD (DOE-ID 1999).

2.3.2 WRRTF-01 and TSF-03 Burn Pit Sites

The selected remedy in the ROD for the burn pits is Option 2, native soil cover, which will address the low-level threat posed by the waste at these sites. The major components of the selected remedy, as described in the ROD (DOE-ID 1999), include:

- Sampling to determine the cover design and monitoring requirements and to ensure that the remedy is protective of human health and the environment
- Comparing cost of the soil cover and long-term monitoring with the excavation and disposal option

- Adding uniform layers of clean soil and surface vegetation to limit direct contact with contaminated soil, if the soil cover option is selected

- Inspecting existing institutional controls to assess the adequacy and need for additional controls.

The ARARs for this remediation were identified and explained in Table 9-2 of the ROD (DOE-ID 1999).

The ROD's contingent remedy for this site was Alternative 3—excavation and disposal of contaminated soils. The major components of the contingent remedy include the following:

- Contaminated soil exceeding the remediation goal would be removed and disposed of

- The excavation would be backfilled with clean soil

- Soil would not be treated and would be disposed of at the ICDF.

2.3.3 WRRTF-13 Fuel Leak

The selected remedy in the ROD for the fuel leak area is Option 4, excavation and land farming. The major components of the selected remedy include:

- Sampling the fuel leak soil to determine risk-based remediation goals in accordance with the *Risk-Based Corrective Action Guidance Document for Petroleum Releases* (IDEQ 1996) and IDEQ guidance (Information Series #7, "Procedures for Land Treatment of Petroleum Contaminated Soils") and determining land farming excavation volumes

- Excavating contaminated soil to a maximum of 3 m (10 ft) or the maximum depth that contaminant concentrations are above risk-based remediation goals in accordance with the *Risk-Based Corrective Action Guidance Document for Petroleum Releases* (IDEQ 1996), whichever is less

- Sampling to ensure that contaminated soil exceeding remediation goals has been removed

- Treating the contaminated soil at the Central Facilities Area Land Farm

- Backfilling the excavated area with clean soil (including any stockpiled) then contouring and grading to surrounding soil.

The ARARs for this remediation were identified and explained in Table 9-5 of the ROD (DOE-ID 1999).

2.3.4 TSF-08 Mercury Spill Area

No remedy was selected in the ROD for the TSF-08 mercury spill area. The ROD determined that a treatability study would be conducted to evaluate INEEL-specific plant uptake factors and rates for phytoremediation. A determination will be made as to subsequent action based on the results of this study, which is planned to be conducted under Waste Area Group (WAG) 10 (if required).

3. DESCRIPTIONS AND BASIS OF THE SIGNIFICANT DIFFERENCES

3.1 V-Tanks Site

For the V-Tanks, this ESD identifies changes regarding the need for (1) additional characterization of soil contamination at the TSF-09/18 V-Tanks site, followed by remediation (if required) and (2) clarification of ARARs for the management and disposal of PCB remediation waste.

3.1.1 Additional Characterization of the Area of Contamination

Performing further characterization of the V-Tanks' soil AOC (defined as the areal extent of contamination) will provide early identification of the AOC for regulatory purposes and will identify the volume of soil that will require remediation. The areal extent of the AOC is expected to exceed the area that requires remediation. By addressing the soil characterization before 2005, a more workable schedule timeframe will be provided for conducting the remaining remedial action after a new technology remedy for V-Tank remediation is selected. The plan and process to evaluate new alternatives and amend the ROD are described in the August 2002 fact sheet, *New Alternatives Considered for V-Tanks at Waste Area Group 1* (INEEL 2002b).

There is indication that contamination from the TSF-09/18 site might extend outside the current boundaries of TSF-09/18. In addition, subsurface contamination identified during removal of the TSF-21 valve pit will be fully characterized for subsequent removal as part of the remedial effort for the V-Tanks. Under this ESD, the levels of surficial (0 to 2 ft below land surface) and subsurface contamination in the area to the northeast and south of TSF-09/18 will be determined, and the volume to be remediated will be expanded (as appropriate). The data obtained in further defining the extent of soil contamination will be used to determine remedial goals for constituents other than Cs-137 for the final Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action.

As part of the remedial action, contaminated soil will be removed from the excavation to the bottom of the V-Tanks. Contaminated soil that exceeds the 23.3-pCi/g remediation goal for Cs-137 will be disposed of at the ICDF or at another approved disposal facility. Samples will be taken at the bottom of the excavation to determine if institutional controls could be required, based upon risk. This approach to remediation of contaminated soil above risk-based levels is consistent with the alternative selected for TSF-09/18 through the proposed plan and ROD. This refinement of the AOC and volume of soil to be remediated is a change to the original remedy and is summarized in Table 1.

Table 1. Summary of changes for the V-Tanks.

Remedial Action Element	Original Remedy	Remedy Change
Extent of the AOC for contaminated soil	Extent of the AOC for contaminated soil is approximately 50 × 80 ft, based on sampling conducted during the remedial investigation for the V-Tanks.	Additional post-ROD characterization will further define the AOC and volume of the contaminated soil requiring remediation.

AOC = area of contamination
ROD = Record of Decision

3.1.2 Additional Applicable or Relevant and Appropriate Requirements

The ARARs identified in the ROD generally remain in effect. A change has been made to clarify the ARARs for managing PCB remediation waste. The ROD identified 40 *Code of Federal Regulations* (CFR) 761(b)(1), which is an ARAR applicable to liquid PCB remediation waste, as being applicable only to the tank contents. More appropriately, this ARAR should have been identified as 40 CFR 761.61(b), "Performance-Based Disposal." In addition, 40 CFR 761.61(a), "Self-Implementing On-Site Cleanup and Disposal of PCB Remediation Waste," and 40 CFR 761.61(c), "Risk-Based Disposal Approval," are being added as ARARs. This ESD clarifies that these three ARARs represent disposal options that are applicable to all PCB remediation waste, including the tank contents, sand filter, piping, and tank debris that will be removed and disposed of under the remedial action.

3.2 WRRTF-01 and TSF-03 Burn Pit Sites

For the burn pits, this ESD identifies changes resulting from post-ROD characterization and evaluation that included further identification of contaminants and evaluation of risk to human health and the environment.

3.2.1 WRRTF-01 Burn Pits

The ROD required native soil covers on WRRTF-01 Burn Pits I, II, and IV. This was based on lead concentrations above the Region 9 residential PRG of 400 mg/kg from the Track 2 investigation. Evaluation of post-ROD characterization results showed that the maximum detected concentration of lead—705 mg/kg—still exceeds the PRG. However, the arithmetic mean concentration of 92 mg/kg and the exposure point concentration of 169 (95% upper confidence limit, assuming a lognormal distribution) were well below the PRG. This evaluation of the post-ROD data confirms that lead is not an appropriate driver for remediation of any of the WRRTF-02 burn pits (DOE-ID 2003).

The Track 2 investigation identified asbestos as being present in only Pits II and IV. Asbestos was not evaluated in the human health risk evaluation. The post-ROD characterization measured asbestos levels in Pits II and IV above action levels. Asbestos at >1%, by volume, is a regulatory and health and safety concern. A decision was made by DOE and the Agencies to place a native soil cover over these soils to prevent future exposure to asbestos. The ARARs related to National Emissions Standards for Hazardous Air Pollutants has been added for the management of asbestos disposal areas. This ESD reflects the change in the contaminant of concern from lead to asbestos while maintaining the remedy of a native soil cover to Pits II and IV.

The Track 2 investigation did not identify asbestos in Pit I, and lead was not identified above the EPA Region 9 residential PRG during the post-ROD characterization. Based on this information, Pit I does not require a native soil cover, and there are no restrictions on the use of this area. The remedy stated in the ROD for this area was capping. This remedy is changed to no action.

The remedy for Pit III remains the same as stated in the ROD, no action. The Track 2 investigation did not identify asbestos as being present in Pit III and lead concentrations are below the EPA Region 9 residential PRG for lead. Thus, the site is available for unrestricted use. No action is required for Pit III.

The WRRTF-01 Burn Pits II and IV maintain the need for a native soil cover followed by institutional controls based on the presence of asbestos above action levels. Institutional controls are necessary to maintain the native soil cover and prevent intrusion. Environmental monitoring is not necessary for sites where asbestos is the only cause for remediation. Pits I and III are no action sites. Neither remedial actions nor institutional controls are required for Pits I and III. A summary table of the

changes for the WRRTF-01 burn pits is proved in Table 2. Changing the remedy for Pit I to no action reduces the areal extent of the native soil cover by about 15%. Completing the native soil cover remedy for Pits II and IV is estimated to cost about $1.3 million.

3.2.1.1 Additional Applicable or Relevant and Appropriate Requirements. The ARARs identified in the ROD remain in effect (DOE-ID 1999). In addition, 40 CFR 61.151(a) requiring a soil cover and 40 CFR 61.151(e) requiring institutional controls have been added for WRRTF Burn Pits II and IV due to the confirmed presence of asbestos.

Table 2. Summary of changes for the WRRTF-01 burn pits.

Remedial Action Element	Original Remedy	Remedy Change
Contaminants of Concern	Lead for Pits I, II, and IV	Asbestos is present at >1% by volume in Pits II and IV. Lead is below the EPA Region 9 residential PRG for all four pits.
Base and Contingent Remedy	Base—native soil cover for Pits I, II, and IV Native soil cover not needed for Pit III Contingent—excavate and dispose	The size of the native soil cover is reduced to cover only Pits II and IV. Native soil cover is not needed for Pits I and III because lead is below risk-based levels, asbestos is not present, and residential risk evaluation allows for unrestricted use. Pits I and III become no action sites.
Monitoring, Maintenance, and Institutional Controls	Environmental monitoring (air, soil, and groundwater, as applicable), cap integrity monitoring and maintenance, and institutional controls	Environmental monitoring is not applicable for any pit. Cap integrity monitoring and maintenance and institutional controls for Pits II and IV. Not needed for Pits I and III.

EPA = U.S. Environmental Protection Agency
PRG = preliminary remediation goal

3.2.2 TSF-03 Burn Pit

For the TSF-03 burn pit site, this ESD identifies the change in remedy from installation of a native soil cover to the contingent remedy of excavation and disposal. The basis for the remedy change is that the original remedy of a soil cover with long-term monitoring has been determined to be more costly than the contingent remedy of excavation and disposal. The cost for excavation and disposal ($0.5M) is estimated to be $1.6M less than a soil cover with long-term monitoring ($2.1M).

Track 2 measured the lead exposure point concentration at 2,464 mg/kg (95% upper confidence limit). Post-ROD sampling confirmed that the lead exposure point concentration (1,354 mg/kg) was above the EPA Region 9 residential PRG of 400 mg/kg. Confirmation sampling will be done after remediation to ensure that remedial goals have been met.

The human health risk evaluation documented in the *TSF-03 and WRRTF-01 Burn Pits 2000/2001 Sample Data Compilation and Risk Assessment Report for Operable Unit 1-10, Waste Area Group 1, at Test Area North* (DOE-ID 2003) documented the presence of dioxins and furans in TSF-03 soils. These dioxins and furans contribute significantly to the residential exposure scenario. The EPA Office of Solid Waste and Emergency Response (OSWER) has issued guidance (OSWER 1998) establishing 1 ppb toxic equivalent (TEQ) as the recommended cleanup level for dioxins and furans for residential exposure scenarios. The mean exposure concentration (95% upper confidence limit) at TSF-03 is 0.5 ppb TEQ or approximately half the recommended cleanup level. Only one of 13 mixed zone soil samples exceeded the recommended cleanup level. However, dioxins and furans will be removed concurrently with the lead during excavation of the TSF-03 area. A summary of the changes for the TSF-03 burn pit is shown in Table 3. The risk-based remedial goals for TSF-03 (DOE-ID 2003) are given in Table 4.

Table 3. Summary of changes for the TSF-03 burn pit.

Remedial Action Element	Original Remedy	Remedy Change
Contaminants of Concern	Lead	Lead
Base and Contingent Remedy	Base—native soil cover Contingent—excavate and dispose	Implement contingent remedy—excavate and dispose of at the ICDF.
Monitoring, Maintenance, and Institutional Controls	Environmental monitoring (air, soil, and groundwater, as applicable), cap integrity monitoring and maintenance, and institutional controls	Environmental monitoring, cap integrity monitoring and maintenance, and institutional controls are not needed because contamination will be removed.

ICDF = INEEL CERCLA Disposal Facility

Table 4. Remedial goals for TSF-03 using excavation and disposal.

Contaminant of Concern	Average 95% Upper Confidence Limit (mg/kg)	Remedial Goal (mg/kg)	Basis
Lead	2,464 (Track 2) 1,354 (post-ROD)	400	EPA Region 9 Preliminary Remediation Goal Table for Residential Soil

EPA = U.S. Environmental Protection Agency
ROD = Record of Decision

3.3 WRRTF-13 Fuel Leak

For the WRRTF-13 fuel leak site, this ESD documents the change to no action at this site based on the post-ROD evaluation of new data against the IDEQ Risk Based Cleanup Action levels. The evaluation was performed as specified in the ROD (DOE-ID 1999) and documented in the *WRRTF-13 Calendar Year 2000 Sampling and Risk Based Corrective Action Analysis Summary Report* (INEEL 2002a). No soil volume exceeded the action levels; therefore, this becomes a no action site. The evaluation of new data and subsequent RBCA analysis based upon a residential scenario is consistent with the ROD and has resulted in the determination that neither remedial actions nor institutional controls are required. The site was assumed to require action when the ROD was signed. A summary of the changes for the WRRTF-13 fuel leak site is shown in Table5.

Table 5. Summary of changes for the WRRTF-13 fuel leak site.

Remedial Action Element	Original Remedy	Remedy Change
Post-ROD Sampling	Sample to determine risk-based remediation goals in accordance with the State of Idaho RBCA Guidance and volume of contaminated soil that must be remediated.	No change
Contaminants of Concern	TPHs above 1,000 ppm	No petroleum constituents above risk-based levels
Remedy	Excavate contaminated soil to a maximum of 3 m (10 ft) or the maximum depth that contaminant concentrations are above risk-based remediation goals, whichever is less. Sample to ensure that contaminated soil above remediation goals has been removed. Treat contaminated soil at the Central Facilities Area Land Farm. Backfill excavated area with clean soil.	Risk-based cleanup evaluation resulted in determining a zero volume above risk-based cleanup levels. Therefore, the volume of soil to be remediated is zero. This a no action site.
Institutional Controls	Establish institutional controls if required based on post-remedial action sampling.	No change. No institutional controls are required since none of the soil is above risk-based cleanup levels.

RBCA = risk-based corrective action
ROD = Record of Decision
TPH = total petroleum hydrocarbon

Evaluation of sample results from the fuel leak site when the tanks and piping were removed from the area indicated the maximum TPHs were above the 1,000-mg/kg evaluation standard. The 1,000-mg/kg TPH standard is no longer cited and has been replaced by the RBCA levels (IDEQ 1996).

3.4 TSF-08 Mercury Spill Area

Transfer of the TSF-08 mercury spill area to WAG 10 is based on Agency agreement that this site should be included under the OU 10-08 Remedial Investigation/Feasibility Study and future ROD. The WAG 1, OU 1-10 remediation will be complete before a decision is made for this site. Under this change, the new plan eliminates unnecessary coordination between WAGs by providing for the further evaluation, remedy decision, and remediation (if required) to all be addressed under the same ROD. The remedy, if required, would be the same regardless of which WAG the remediation is performed under. A summary of the changes for the TSF-08 mercury spill area is given in Table 6.

Table 6. Summary of changes for the TSF-08 mercury spill area.

Remedial Action Element	Original Remedy	Remedy Change
Post-ROD Study and Risk Assessment	Treatability study to evaluate plant uptake factors and rates (to be conducted by WAG 10) Revised risk analysis using site-specific data	No change to remedy. Remedy actions will be conducted under WAG 10, OU 10-08.
Remedial Action	Remediation, as necessary, under WAG 1 in the future	No change to remedy. Site TSF-08 is transferred from WAG 1, OU 1-10 to WAG 10, OU 10-08.

OU = operable unit
ROD = Record of Decision
TSF = Technical Support Facility
WAG = waste area group

4. AGENCY COMMENTS

The EPA and the IDEQ have reviewed this ESD and support the changes to the selected remedy for the identified OU 1-10 sites.

5. PUBLIC PARTICIPATION

The INEEL will publish a notice of availability and a brief description of this ESD in the local newspaper (the Idaho Falls *Post Register*) and six other Idaho newspapers to meet the requirements of 40 CFR 300.435(c)(2)(i). The INEEL Community Relations Office may be contacted at (208) 526-4700 or (800) 708-2680. There will be no formal comment period.

An update fact sheet entitled *New Alternatives Considered for V-Tanks at Waste Area Group 1* (INEEL 2002b) was issued in August 2002. This fact sheet addressed the Agencies' plan to consider new alternatives for remediation of the V-Tanks, identified the technologies that would be evaluated, and outlined the process for choosing the new remedy.

6. AFFIRMATION OF THE STATUTORY DETERMINATIONS

The DOE, EPA, and IDEQ believe, after reviewing the proposed changes to the selected remedy, that the remedy remains protective of human health and the environment, complies with federal and state requirements identified in the ROD as applicable or relevant and appropriate to the remedial action at the time of the final ROD, and is cost-effective. Additional ARARs have been identified to cover the remedial action for the V-Tanks. In addition, permanent solutions and alternative treatment technologies are included in the revised remedy to the maximum practicable extent.

7. REFERENCES

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40 CFR 761.61, 2003, "PCB Remediation Waste," *Code of Federal Regulations*, Office of the Federal Register, January 2003.

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40 CFR 761.61(b), 2003, "Performance-Based Disposal," *Code of Federal Regulations*, Office of the Federal Register, January 2003.

40 CFR 761.61(c), 2003, "Risk-Based Disposal Approval," *Code of Federal Regulations*, Office of the Federal Register, January 2003.

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INEEL, 2002a, *WRRTF-13 Calendar Year 2000 Sampling and Risk Based Corrective Action Analysis Summary Report*, INEEL/EXT-02-01137, Revision 0, Idaho National Engineering and Environmental Laboratory, October 2002.

INEEL, 2002b, *New Alternatives Considered for V-Tanks at Waste Area Group 1*, Document No. 24747, Revision 0, Idaho National Engineering and Environmental Laboratory, August 2002.

OSWER to Director of Office of Site Remediation and Restoration Region I et al., April 13, 1998, "Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites," OSWER Directive 9200.4-26.